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DOCKET NO.: P0453.70112US01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Boyd et al.  
Serial No.: 10/821,813  
Confirmation No.: 9059  
Filed: April 8, 2004  
For: THE USE OF METHYLNALTREXONE TO TREAT IRRITABLE  
BOWEL SYNDROME

Examiner: Not Yet Assigned  
Art Unit: 1614

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 6 day of August, 2004.

Kristin J. Ketelhut  
Kristin J. Ketelhut

Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith are the following documents:

- [X] Information Disclosure Statement
- [X] PTO Form 1449 with cited references
- [X] Return Receipt Postcard

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (617) 646-8000, Boston, Massachusetts.

A check is not enclosed. If a fee is required, the Commissioner is hereby authorized to charge Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

Respectfully submitted,  
*Boyd et al., Applicant*

By: Edward R. Gates  
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Docket No. P0453.70112US01  
Date: August 6, 2004  
xNDDx



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*Kristin J. Ketelhu*  
Kristin J. Ketelhu

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

STATEMENT FILED PURSUANT TO THE DUTY OF  
DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

PART I: Compliance with 37 C.F.R. §1.97

This Information Disclosure Statement has been filed before the mailing date of a first Office Action on the merits in the above-identified case.

No fee or certification is required.

## PART II: Information Cited

The Applicant hereby makes of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

The Applicant hereby makes the following additional information of record in the above-identified application.

The following are remarks concerning the other information cited:

## PART III: Remarks

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

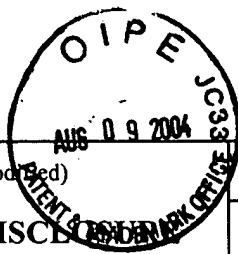
Respectfully submitted,  
Boyd et al., *Applicant*

By: Edward R. Gates  
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Docket No. P0453.70112US01

Date: August 6 2004

**XNDDX**



FORM PTO-1449/A and B (Modified)

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/821,813

ATTY. DOCKET NO.: P0453.70112US01

FILING DATE: April 8, 2004

CONFIRMATION NO.: 9059

APPLICANT: Boyd et al.

GROUP ART UNIT: 1614

EXAMINER: Not Yet Assigned

Sheet 1 of 3

**U.S. PATENT DOCUMENTS**

Examiner's Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YYYY
		Number	Kind Code		
	A30	4,311,833		Namikoshi, <i>et al.</i>	01-19-1982
	A31	4,377,568		Chopra, <i>et al.</i>	03-22-1983
	A32	4,385,078		Onda, <i>et al.</i>	05-24-1983
	A33	4,457,907		Porter, <i>et al.</i>	07-03-1984
	A34	4,462,839		McGinley, <i>et al.</i>	07-31-1984
	A35	4,518,433		McGinley, <i>et al.</i>	05-21-1985
	A36	4,556,552		Porter, <i>et al.</i>	12-03-1985
	A37	4,606,909		Bechgaard, <i>et al.</i>	08-19-1986
	A38	4,615,885		Nakagame, <i>et al.</i>	10-07-1986
	A39	4,670,287		Tsuji, <i>et al.</i>	06-02-1987
	A40	4,857,833		Sherman, <i>et al.</i>	08-15-1999
	A41	4,888,346		Bihari, <i>et al.</i>	12-19-1989
	A42	5,426,112		Zagon, <i>et al.</i>	06-20-1995
	A43	5,536,507		Abramowitz, <i>et al.</i>	07-16-1996
	A44	5,567,423		Ying, <i>et al.</i>	10-22-1996
	A45	5,591,433		Michael, <i>et al.</i>	01-07-1997
	A46	5,597,564		Ying, <i>et al.</i>	01-28-1997
	A47	5,609,871		Michael, <i>et al.</i>	03-11-1997
	A48	5,614,222		Kaplan, <i>et al.</i>	03-25-1997
	A49	5,626,875		Ballester Rodes, <i>et al.</i>	05-06-1997
	A50	5,629,001		Michael, <i>et al.</i>	05-13-1997
	A51	6,025,154		Li, <i>et al.</i>	02-15-2000
	A52	6,353,004	B1	Farrar, <i>et al.</i>	03-05-2002
	A53	6,469,030	B2	Farrar, <i>et al.</i>	10-22-2002
	A54	2001/0036951	A1	Farrar, <i>et al.</i>	11-01-2001

**FOREIGN PATENT DOCUMENTS**

Examiner's Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document (not necessary)	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/ Country	Number	Kind Code			
	B22	AU	758,416		Arch Development Corp.	07-03-1999	
	B23	CA	2,312,234		Arch Development Corp.	05-14-1999	
	B24	DE	3,780,819				
	B25	EP	1,047,726	A1	Quest International B.V.	07-22-1999	
	B26	WO	99/22737	A1	Arch Development Corp.	05-14-1999	
	B27	WO	04/043964	A2	Mallinckrodt	05-27-2004	

<b>FORM PTO-1449/A and B (Modified)</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 10/821,813		ATTY. DOCKET NO.: P0453.70112US01	
				FILING DATE: April 8, 2004		CONFIRMATION NO.: 9059	
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				GROUP ART UNIT: 1614		EXAMINER: Not Yet Assigned	
Sheet	2	of	3				

**OTHER ART — NON PATENT LITERATURE DOCUMENTS**

Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
	C117	ALTIER et al., Opioid receptors in the ventral tegmental area contribute to stress-induced analgesia in the formalin test for tonic pain. Brain Res. 1996 Apr 29;718(1-2):203-6.	
	C118	BAKER et al., Functional effects of systemically administered agonists and antagonists of mu, delta, and kappa opioid receptor subtypes on body temperature in mice. J Pharmacol Exp Ther. 2002 Sep;302(3):1253-64.	
	C119	BASILISCO et al., Oral naloxone antagonizes loperamide-induced delay of orocecal transit. Dig Dis Sci. 1987 Aug;32(8):829-32.	
	C120	BASILISCO et al., Effect of loperamide and naloxone on mouth-to-caecum transit time evaluated by lactulose hydrogen breath test. Gut. 1985 Jul;26(7):700-3.	
	C121	BOWEN et al., Antagonism of the antinociceptive and discriminative stimulus effects of heroin and morphine by 3-methoxynaltrexone and naltrexone in rhesus monkeys. J Pharmacol Exp Ther. 2002 Jul;302(1):264-73.	
	C122	BOWEN et al., College on Problems of Drug Dependence 64th Annual Scientific Meeting. June 8-13, 2002. Quebec City, Quebec, Canada. Abstracts. Drug Alcohol Depend. 2002 May 1;66 Suppl 1:S1-220. Abstract No. 65.	
	C123	CARR et al., Naltrexone antagonizes the analgesic and immunosuppressive effects of morphine in mice. J Pharmacol Exp Ther. 1994 May;269(2):693-8.	
	C124	CHOI et al., Opioid antagonists: a review of their role in palliative care, focusing on use in opioid-related constipation. J Pain Symptom Manage. 2002 Jul;24(1):71-90. Review.	
	C125	CHOI et al., Inhibition of chemokine-induced chemotaxis of monkey leukocytes by mu-opioid receptor agonists. In Vivo. 1999 Sep-Oct;13(5):389-96.	
	C126	DE PONTI et al., Methyl naltrexone Progenics. Curr Opin Investig Drugs. 2002 Apr;3(4):614-20. Review.	
	C127	FLORES et al., Mechanisms of morphine-induced immunosuppression: effect of acute morphine administration on lymphocyte trafficking. J Pharmacol Exp Ther. 1995 Mar;272(3):1246-51.	
	C128	GILES et al., Quaternary opiate antagonists lower blood pressure and inhibit leucine-enkephalin responses. Eur J Pharmacol. 1983 Nov 25;95(3-4):247-52.	
	C129	HO et al., Suppression of immunological functions in morphine addicted mice. NIDA Res Monogr. 1986;75:599-602.	
	C130	KEHLET et al., Review of postoperative ileus. Am J Surg. 2001 Nov;182(5A Suppl):3S-10S. Review.	
	C131	KOSTEN et al., Naltrexone and morphine alter the discrimination and plasma levels of ethanol. Behav Pharmacol. 1999 Feb;10(1):1-13.	
	C132	KOSTIC, CAS Abstract Document No. 127: 13345, 1997.	
	C133	LI et al., Methadone enhances human immunodeficiency virus infection of human immune cells. J Infect Dis. 2002 Jan 1;185(1):118-22. Epub 2001 Dec 14.	
	C134	MACK, Paralytic ileus: response to naloxone. Br J Surg. 1989 Oct;76(10):1101.	
	C135	NEMETH-LEFKOWITZ et al., Research communication in Substances of Abuse (1980) 1(2): 177-83.	
	C136	PHAM et al., Drugs of Abuse: Chemistry, Pharmacology, Immunology and AIDS; National Institute of Drug Research 96: Monograph Series. U.S. Department of Health and Human Services; 1990.	
	C137	QUANG-CONTAGREL et al., Long-term methadone treatment: effect on CD4+ lymphocyte counts and HIV-1 plasma RNA level in patients with HIV infection. Eur J Pain. 2001;5(4):415-20.	
	C138	SAKURADA et al., Differential antagonism of endomorphin-1 and endomorphin-2 supraspinal antinociception by naloxonazine and 3-methylnaltrexone. Peptides. 2002 May;23(5):895-901.	
	C139	SANDNER-KEISLING et al., Pharmacology of opioid inhibition to noxious uterine cervical distension. Anesthesiology. 2002 Oct;97(4):966-71.	
	C140	SHAVIT et al., Effects of a single administration of morphine or footshock stress on natural killer cell cytotoxicity. Brain Behav Immun. 1987 Dec;1(4):318-28.	
	C141	SOLDANI et al., Central and peripheral involvement of mu receptors in gastric secretory effects of opioids in the dog. Eur J Pharmacol. 1985 Nov 19;117(3):295-301.	
	C142	STEINBROOK et al., An opioid antagonist for postoperative ileus. N Engl J Med. 2001 Sep 27;345(13):988-9.	
	C143	WEI et al., Abstracts of the 2002 Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics. Atlanta, Georgia, USA. March 24-27, 2002. Clin Pharmacol Ther. 2002 Feb;71(2):P1-136.	

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				APPLICANT: Boyd et al.			
				GROUP ART UNIT: 1614		EXAMINER: Not Yet Assigned	
Sheet	3	of	3				

	C144	WILMORE et al., Can we minimize the effects of opioids on the bowel and still achieve adequate pain control? Am J Surg. 2001 Nov;182(5A Suppl):1S-2S.		
	C145	WYBRAN et al., Suggestive evidence for receptors for morphine and methionine-enkephalin on normal human blood T lymphocytes. J Immunol. 1979 Sep;123(3):1068-70.		
	C146	YUAN, Clinical Status of Methylnaltrexone, A New Agent to Prevent and Manage Opioid-Induced Side Effects. J Support Oncol. 2004 Mar/Apr: 2(2):111-22.		

EXAMINER	DATE CONSIDERED
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#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

\*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. \_\_, filed \_\_, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).

[NOTE - Must provide a copy of any patent, publication, other information listed, even if it was previously submitted to, or cited by, the U.S. Patent Office in an earlier application, unless the earlier application is identified by the IDS and is relied upon for an earlier filing date under 35 U.S.C. §120, and the copy was provided in the earlier application.]